

Work Order ID 82831

82831

Page 1

April-10-12 2:16:50 PM

Item ID: D204-635-041

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Replacement Skidtube

Start Date: 10/04/2012 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 24/04/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/04/10 Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run/Hours

Tool ID Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2590-041

(DEO)REV.E

100

100

DC

Document Control

Memo

0.00

Photocopy-bluefile & type labels per PPP D204-635-041
CHG 005

SCRAP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Revision ID:

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Stop ***NS2***

Start Date: 10/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 24/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110

0.00

110

Skidtubes

Skidtubes

Memo

0.00

1- Inspect mat'l D2500-1-190 for damage

2-Cut D2500-1-190 per Dwg D2590 .Deburr ends

3-Drill pilot holes using drill jig DT 8149 & DT8711-1&-2 and open to finish size as per dwg

4-Deburr holes as per QSI002 section 4.2.3 and blow out all chips from inside of tube

5-Acid etch and Alodine tube per QSI 005 4.1

6-Bond web in place per QSI 015. Allow 12 Hrs. cure time before cutting Pick:

Qty Part Number Description Batch

A/R Sikaflex-291

Sikaflex expire date: 13/03/19 *21/22/30*

Start Time: *0h30*

Fin Time:

1 SAD 12.07-26

W/O: 82831

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D204-635-041 PAR #: _____ Fault Category: SKD Tube NCR: Yes No DQA: Aut Date: 12/08/13
 Resolution: _____ Disposition: Scrap QA: N/C Closed: 130 Date: 12/08/14

NCR: 1280.69

WORK ORDER NON-CONFORMANCE (NCR)

DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/7/13	110	Fwd bend is 1.6" short 1.0" on length & 0.5" short on height. Cause: Saw setup resulted in wrong cut height.	<u>W</u> <u>12/8/13</u>	Based on eng layout, deduction is very noticeable. Tube should be scrapped <u>CP 12/7/13</u>	<u>SAD</u> <u>12-08-02</u>	<u>12-8-2</u>	<u>W</u> <u>12/8/13</u>	<u>DAS</u> <u>16</u> <u>8-13</u> <u>12/8/13</u>

NOTE: Date & initial all entries

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Stop ***NS2***

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Start Date: 10/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 24/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:


Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
120									
CNC Bend 1	Memo	0.00							
CNC Delta 100 Bender	Bend as per program D2590.C on CNC Bender								
130		0.00							
130									
Skidtubes	Memo	0.00							
Skidtubes	1-Cut tubes as per Dwg. D2590 .								
	2-Deburr ends after cutting.								
140	QC6- Inspect dimensions to drawing	0.00							
140									
QC	Memo	0.00							
Quality Control									

 12-7-27

PTO →

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Required Date: 24/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150

0.00

150

Skidtubes

Skidtubes

Memo

0.00

1-Prepare tube for welding D2576-3 Step Remove alodine as required.

2-Weld step D2576 as per Dwg. D2590 and QSI 004
A/R Aluminum Rod

3-Grind weld flush on step

4-Insert D4202-1 spacer, swage as per QSI002 and trim/ grind flush per QSI002
and as per dwg5-Drill holes for wearplates using DT 8218 & DT8937 Open holes to 19/64",
adjust stopper not to hit web. Deburr

6-Drill pilot holes for aft cap using DT 8215 Open holes to #6 Drill bit. Deburr

7-Drill pilot holes for Tow ring using DT9425, open to .640" and Deburr
****verified dim. before drilling****

160

QC10- Inspect visual per QSI004- ground welds

0.00

160

QC

Quality Control

Memo

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NS2

Start Date: 10/04/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 24/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170

QC6- Inspect dimensions to drawing

0.00

170

QC

Memo

0.00

Quality Control

175

Pressure Wash per QSI005 4.3

0.00

175

HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

180

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

180

Powdercoat

Memo

0.00

Powder Coating

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Cust Item ID:

Required Date: 24/04/2012 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC3- Inspect Part Finish

0.00

190

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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1

Cust Item ID:

Required Date: 24/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

200

Assemble as per dwg

0.00

200

HandFinish

Memo

0.00

Hand Finishing

1-Install inserts & wearplates & gaskets using a drop of Sikaflex on insert holes before installing wearplates

A/R Sikaflex-291 _____

Sikaflex expire date: _____

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2590 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive

A/R Sikaflex-291 _____

Sikaflex expire date: _____

5-Wing Walk as per Dwg D2590 and QSI 005

4.4

Batch: _____

W/O:		WORK ORDER CHANGES					
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Revision ID:

Item Name: Replacement Skidtube

Stop ***NS2***

Start Date: 10/04/2012 Start Qty: 1.00

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Cust Item ID:

Required Date: 24/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____

Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

210

QC5- Inspect part completeness to step on W/O

0.00

210

QC

Memo

0.00

Quality Control

215

Identify as per dwg & Stock Location: _____

0.00

215

Packaging

Memo

0.00

Packaging

220

QC21- Final Inspection - Work Order Release

0.00

220

QC

Memo

0.00

Quality Control

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

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Work Order ID: 82831

82831

Parent Item: D204-635-041

D204-635-041

Parent Item Name: Replacement Skidtube

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:F 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30KJ
 IPP Rev:G 07-07-09 Added SS Wearplates & Gaskets JLM IPP RevH:
 add identify and stock seq DD 10.01.28 verf:EC
 IPP Rev:I 10.12.01 as per DEO DD verf:EC IPP REV:J
 12.01.23 AS PER ECN11-684 DD
 VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4202-1		Manufactured	No			150	Each	290.0000	17	17			

D4202-1

Spacer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
LG	5	
77727	5	
LG002	285	
78806	6	
79810	279	

ALS7-1032-130

Purchased

No

180

Each

234.0000

44

44

ALS7-1032-130

Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST280	149	
117717	27	
118966	22	
119775	100	
ST282	85	
119530	73	
120181	12	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Work Order ID: 82831

82831

Parent Item: D204-635-041

D204-635-041

Parent Item Name: Replacement Skidtube

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

AN3-5A Purchased No

180

Each

1,536 000

2

2

AN3-5A

Bolt

Location

Loc Qty

Loc Code

ST350

1536

115371

46

117423

124

118626

166

119355

200

120187

500

121185

500

AN3C4A Purchased No

180

Each

2,952.000

44

44

AN3C4A

BOLT

Location

Loc Qty

Loc Code

ST350

2952

120187

1886

120521

28

120769

38

121205

1000

AN960C10L NAS1149C0332 Purchased No

180

Each

0.0000

44

44

***AN960C10I ***

washer

AN960JD10L NAS1149D0332J Purchased No

180

Each

0.0000

2

2

***AN960.ID10I ***

Washer

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Parent Item: D204-635-041

D204-635-041

Parent Item Name: Replacement Skidtube

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2594-1

Manufactured No

180

Each

567.0000

10

10

D2594-1

Plug, 205 Skidtube

Location

Loc Qty

Loc Code

FP001

322

73401

30

74442

34

79495

258

FP-A

245

73401

0

78590

245

D2594-3

Manufactured No

180

Each

2,674.000

10

10

D2594-3

O-Ring, 205 Skidtube

Location

Loc Qty

Loc Code

FP001

2674

65518

41

79496

984

79573

50

79755

1599

D2855

Manufactured No

180

Each

41.0000

1

1

D2855

Cap

Location

Loc Qty

Loc Code

FP002

41

65519

2

73347

29

75074

10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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D204-635-041

Parent Item Name: Replacement Skidtube

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3564-11

Manufactured No

180

Each

20.0000

1

1

D3564-11

Wearshoe

Location

Loc Qty

Loc Code

FG

4

77056

4

FP001

16

78871

4

80341

12

D3564-13

Manufactured No

180

Each

36.0000

1

1

D3564-13

Wearshoe

Location

Loc Qty

Loc Code

FP001

2

71594

1

77610

1

FP002

34

80342

12

82249

22

D3564-7

Manufactured No

180

Each

13.0000

1

1

D3564-7

Wearshoe

Location

Loc Qty

Loc Code

FP001

13

33803

2

43229

11

W/O:		WORK ORDER CHANGES					
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D204-635-041

Parent Item Name: Replacement Skidtube

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3564-9

Manufactured No

180

Each

9.0000

1

1

D3564-9

Wearshoe

Location

Loc Qty

Loc Code

FG

4

76950

4

FP001

5

67590

4

69943

1

D3566-1

Manufactured No

180

Each

39.0000

2

2

D3566-1

Gasket

Location

Loc Qty

Loc Code

FP

-10

81619

22

FP002

49

68924

2

80919

15

D3566-13

Manufactured No

180

Each

18.0000

1

1

D3566-13

Gasket

Location

Loc Qty

Loc Code

FP002

18

76947

18

D3566-7

Manufactured No

180

Each

20.0000

1

1

D3566-7

Gasket

Location

Loc Qty

Loc Code

FP002

20

55490

20

W/O:		WORK ORDER CHANGES					
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82831

D204-635-041

Start Date: 10/04/2012

Required Date: 24/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2500-1-190

Manufactured No

110

Each

100.0000

1

1

D2500-1-190

Ext'n -T Beam Tube 4"

**

SAD 12-07-26

Location

Loc Qty

Loc Code

HALL

100

74777

20

80061

80

385483

1

D2597

Manufactured No

110

Each

0.0000

1

1

D2597

204 Web

D2576-3

Manufactured No

150

Each

35.0000

1

1

D2576-3

Step (maching detail)

**

SAD 12-07-26

**

Location

Loc Qty

Loc Code

LG

35

74136

35

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

LIST OF MATERIALS				
ITEM	QTY -041	QTY -043	PART NUMBER	DESCRIPTION
1	X		D2590-041	SKIDTUBE ASSEMBLY
2		X	D2590-043	SKIDTUBE ASSEMBLY
3	1	1	D2500-1-190	EXTRUSION
4		16	D2570	BUSHING
5	1	1	D2576-3	STEP
6	17	22	D2579	SPACER
7	10	4	D2594-1	PLUG
8	10	4	D2594-3	O-RING
9	1	1	D2597	204 WEB
10	1	1	D2855	AFT CAP
11	1		D3564-7	WEARSHOE
12	1		D3564-9	WEARSHOE
13	1		D3564-11	WEARSHOE
14	1		D3564-13	WEARSHOE
15	2		D3566-1	GASKET
16	1		D3566-7	GASKET
17	1		D3566-13	GASKET
18		1	D4408-041	WEARPLATE ASSEMBLY
19		1	D4408-043	WEARPLATE ASSEMBLY
20	44		ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
21	44		AN3C4A	BOLT
22	2	2	AN3-5A	BOLT
23		8	AN4-45A	BOLT
24	44		NAS1149C0332R	WASHER (AN960C10L)
25	2	2	NAS1149D0332J	WASHER (AN960JD10L)
26		8	MS21042-4	NUT (OR MS21042L4)

GENERAL NOTES:

- 1) MATERIAL N/A
- 2) FINISH CHEMICAL CONVERSION PER DART QSI 005 4 1 PRIOR TO INSERTING D2597 WEB
POWDER COAT ASSEMBLY GLOSS WHITE 4 3 5 1 PER DART QSI 005 4 3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4 4
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2590-041 = 31.5 lbs
D2590-043 = 33.3 lbs
- 8) WELDING PER DART QSI 004
- 9) INSERT D2597 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP
- 10) BEND AS A SMOOTH RAD US STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE
- 11) USE DART DRILL TEMPLATE DT8218 ONLY FOR D2590-041 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION B-B (44 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/-291.
- 12) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (10 PLACES FOR D2590-041 AND 8 PLACES FOR D2590-043)
- 13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT

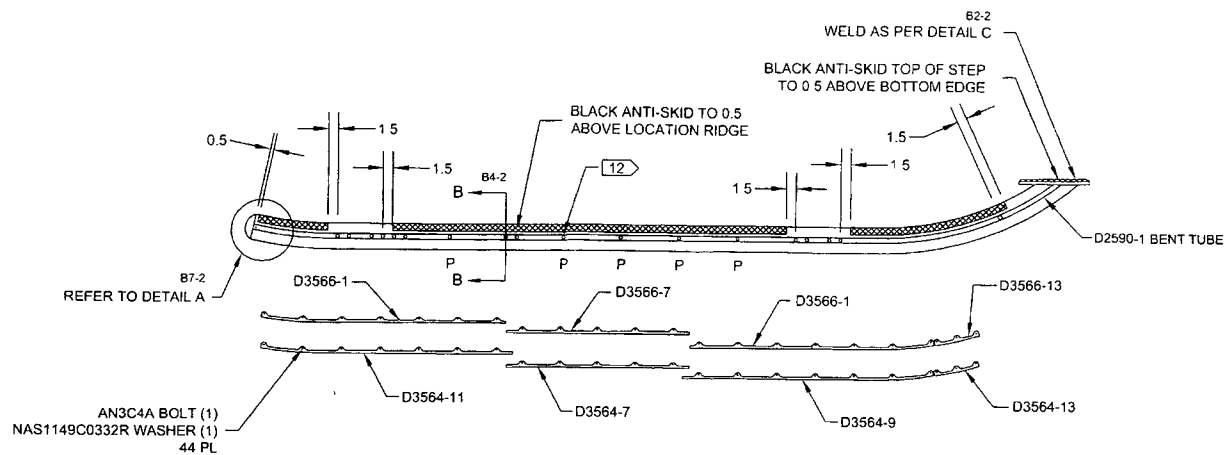
WITHOUT NOTICE
WORK ORDER
NO. 82831 *MLJ*

12/04/10

DEO ATTACHED

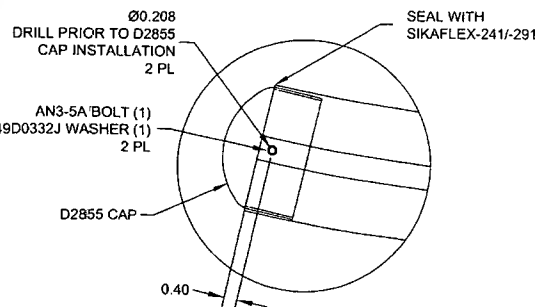
RELEASED
2011-08-29
MM

E	ADD D2590-043; DT8218 WAS TD2577-204 (ZN C4-1); REFORMATTED DRAWING TO CURRENT STANDARDS	RF	11.06.21
D	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124	PH	07.04.05
C	REDRAWN, INCLUDED DEO 9094/ 9097	CP	98.08.28
B	AS MANUFACTURED	DS	96.12.02
A	NEW ISSUE	DS	96.09.16
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>#</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>AP</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>DS</i>	D2590	SHEET 1 OF 6
APPROVED	<i>AP</i>	TITLE	SCALE
DE APPR.	<i>AP</i>	204 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

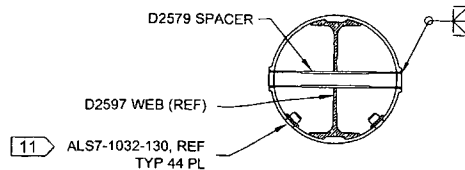


D2590-041 ASSEMBLY DETAIL

DETAIL A C6-2
SCALE 5X

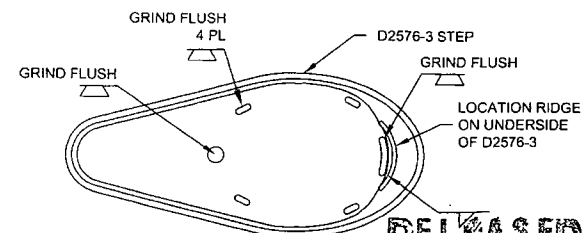


SECTION B-B D5-2
SCALE 5X



- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
 2. INSERT D2579 SPACER (17 PLACES)
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

DETAIL C D3-2
SCALE 5X

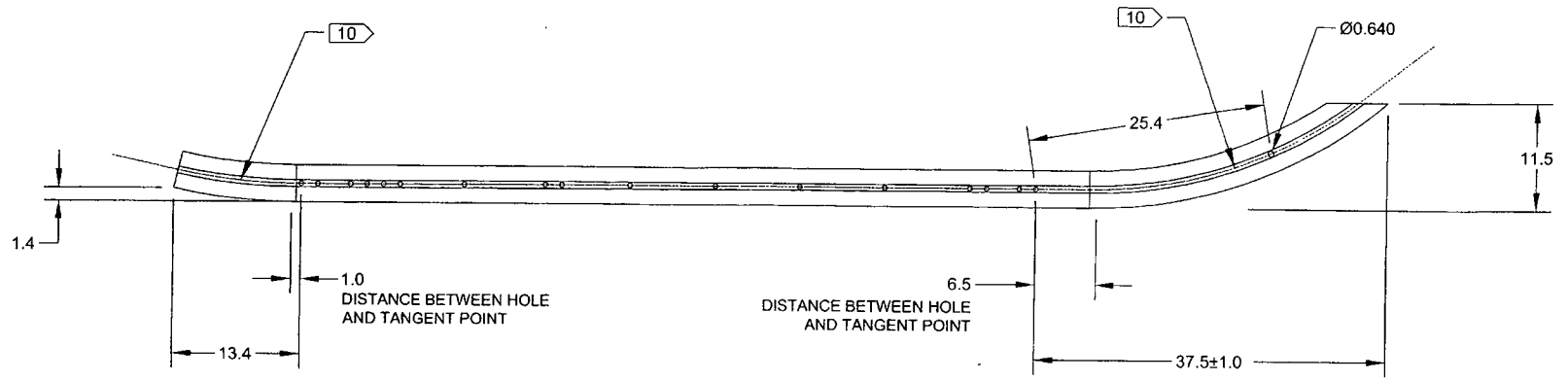


DEO ATTACHED

RELEASED
2011-08-29

DESIGN	4	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2590	SHEET 2 OF 6
APPROVED	10	TITLE	SCALE
DE APPR.	10	204 SKIDTUBE ASSEMBLY	NTS
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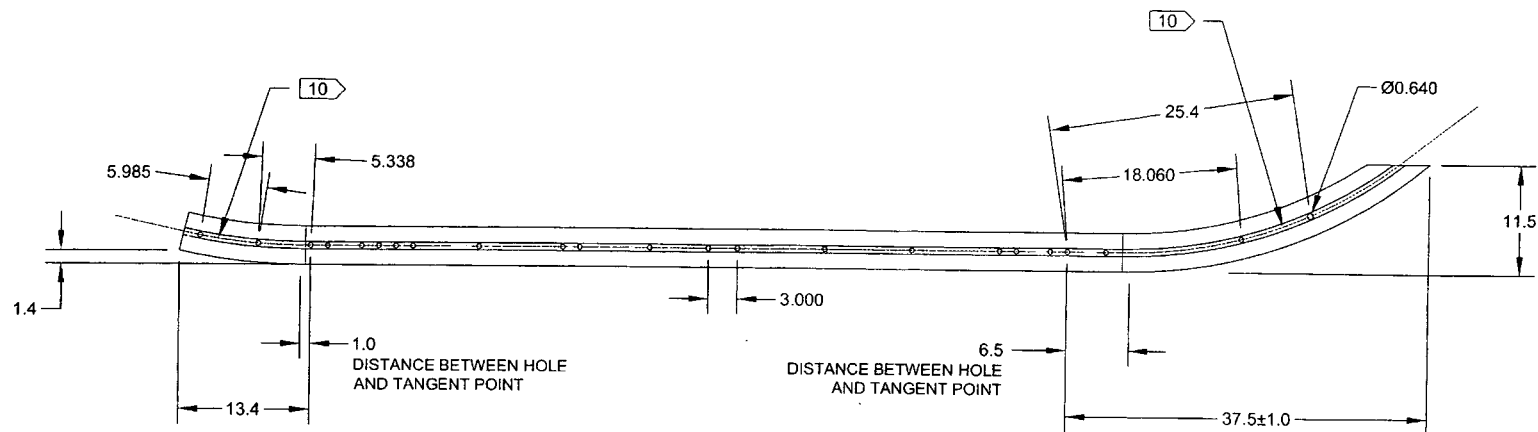
D2590-1 BENT TUBE
(MAKE FROM D2590-101 TUBE)

DEO ATTACHED
RELEASED
2011-08-29

DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2590	SHEET 3 OF 6
APPROVED	10	TITLE	SCALE
DE APPR.	#	204 SKIDTUBE ASSEMBLY	NTS
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13.25 71.03 ± 7 35.9 126.2 1.7

02831

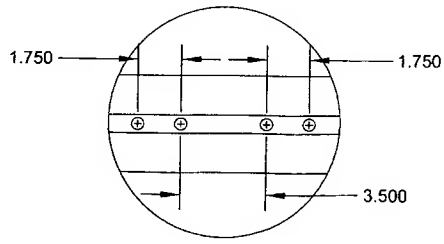
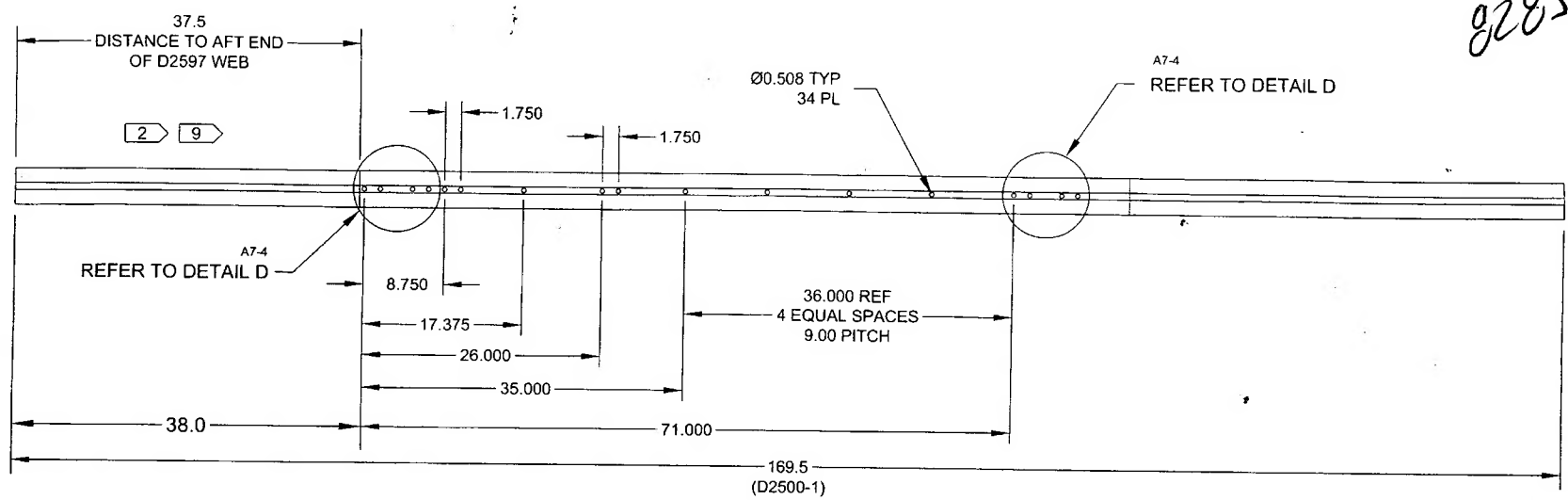


E D2590-3 BENT TUBE
(MAKE FROM D2590-101 TUBE)

DEO ATTACHED
RELEASED
2011-08-28
IN

DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RF	DRAWING NO.	REV. E
MFG. APPR.	RF	D2590	SHEET 5 OF 6
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	204 SKIDTUBE ASSEMBLY	NTS
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82831



D2590-101 TUBE

DETAIL D
SCALE 5X

D3-4
C7-4

DEO ATTACHED
RELEASED
2011-08-29
ND

DESIGN	#	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AP	DRAWING NO.	REV. E
MFG. APPR.	AS	D2590	SHEET 6 OF 6
APPROVED	AP	TITLE	SCALE
DE APPR.	#	204 SKIDTUBE ASSEMBLY	NTS
DATE	11.06.21	<small>COPYRIGHT © 1996 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

DRAWING NO. D2590	TITLE 204 SKIDTUBE ASSEMBLY	REV. E	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D2590-E-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN 90	CHECKED ASS	MFG. APPR. [Signature]	APPROVED [Signature]		DE APPR. [Signature]		
DATE 11.12.13	DATE 11.12.13	DATE 11.12.13	DATE 11/12/13		DATE 11/12/13		

PURPOSE:

CHANGE ALL WELDED CROSSBOLT SPACERS TO SWAGED SPACERS

CHANGE:

PARTS LIST IS AMENDED AS FOLLOWS:

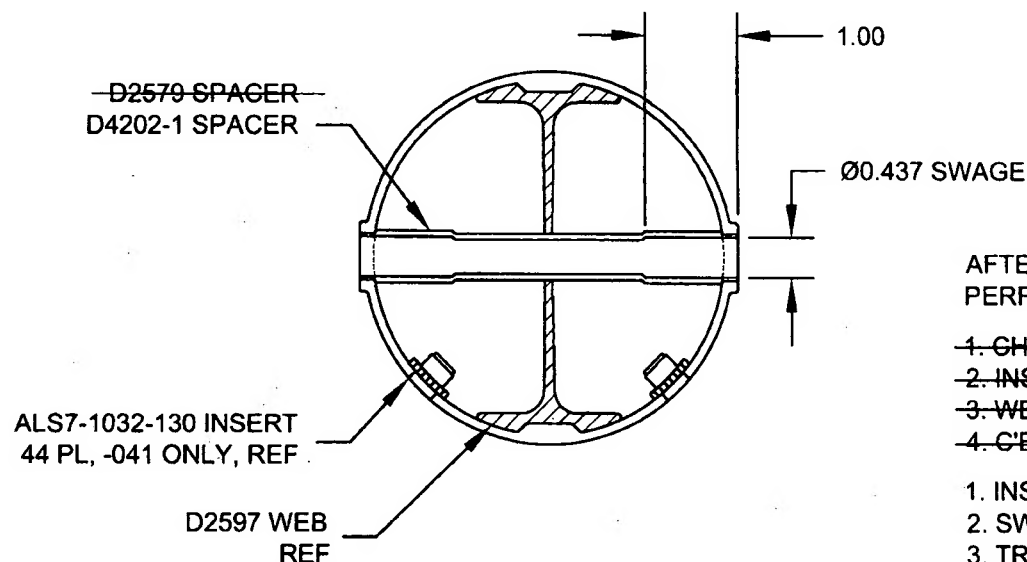
WAS

QTY	QTY	PART NUMBER	DESCRIPTION
-041	-043		
17	22	D2579	CROSS BOLT SPACER

IS

17	22	D4202-1	SPACER
----	----	---------	--------

SECTION B-B & F-F IS AMENDED AS FOLLOWS:



RELEASED
2011-12-15
[Signature]

AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
 2. INSERT D2579 SPACER (17 PLACES)
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP
1. INSERT D4202-1 SPACER, 17 PL
 2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
 3. TRIM / GRIND FLUSH PER QSI 002

SECTION B-B & F-F
NOT TO SCALE

